IN THE CLAIMS:

1. (Currently Amended) A network relaying apparatus, comprising:

a plurality of I/O ports adapted to be connected to respective network terminals;

means for storing ~~relating to a connecting state of said network terminal, said~~ correspondence information indicating a correspondence between each of said I/O ports and a network address of each of said network terminals connected to each of said I/O ports;

means for storing user authentication information for each of said network addresses;

packet communicating means for transmitting and receiving packets through said I/O ports;

packet relaying means for determining a destination of ~~the~~ each packet received ~~from each of~~ via said plurality of I/O ports ~~by said packet communicating means~~ on a basis of the correspondence information held by said means for storing the correspondence information ~~relating to the connecting state of said network terminal~~, and for instructing said packet communicating means to transmit said received packets to the determined destination; and

user authenticating means for determining ~~if the~~ correspondence of user authentication information ~~specified against said~~ and network addresses ~~is correct~~ on a basis of the user authentication information stored in said means for storing the authentication information,

wherein said packet relaying means operates to learn whether there is correspondence between ~~the~~ an I/O port ~~for receiving said received packet~~ which has received a packet and said source network address identified in the packet on a basis of the source network address ~~information~~ contained in said received packet, request ~~the~~ user authentication information for a ~~the~~ source network terminal having the source network address if the change of the content of said means for storing the correspondence information relating to the connecting state of the source network terminal is required by said learned result, ~~specify the user authentication information transmitted by said source network terminal,~~ instruct said user authenticating means to execute the user authentication for user authentication information receeived in response to the request, and change the content of said means for storing the correspondence information ~~relating to the connecting state of said network terminal~~ and cause said received packet to be relayed ~~relay said received~~

~~packet~~ to the determined destination if the user is authenticated to be correct.

2. (Currently Amended) A network relaying apparatus as claimed in claim 1, wherein said network relaying ~~device~~ apparatus is a LAN switch including a virtual LAN.

3. (Currently Amended) A network relaying apparatus as claimed in claim 1, wherein if the user authentication indicates the user is not correct for said network address, said packet communicating means operates to suppress the change of the content of said means for storing the correspondence information relating to the connecting state of said network terminal and discard the received packet having caused the change.

4. (Currently Amended) A network relaying apparatus as claimed in claim 1, wherein the user authentication information stored in said ~~storing~~ means for storing user authentication information contains a contact mail address of the concerned user, and said user authenticating means operates to create a message [[for]] indicating that a packet having the incorrect user authentication information has been

~~transmitted to a contact mail address registered in said means for storing the user authentication information~~ received by the network relaying apparatus if the user authentication information is determined to be incorrect for said source network address as a result of said user authentication, and to instruct said packet communicating means to transmit said message to said contact mail address of the concerned user.

5. (Currently Amended) A network relaying apparatus as claimed in claim 1, further comprising means for storing a contact mail address of an administrator of said network relaying ~~device~~ apparatus, wherein said user authenticating means operates to create a message [[for]] indicating that a packet having the incorrect user authentication information has been ~~transmitted to a correct mail address of an administrator of said network relaying apparatus~~ received by the network relaying apparatus if the user authentication is determined to be incorrect for said source network address as a result of said user authentication, and to instruct said packet communicating means to transmit said message to the contact mail address of the administrator.

6. (Original) A network relaying apparatus as claimed in claim 1, wherein said network address is an IP address.

7. (Currently Amended) A network relaying apparatus as claimed in claim 1, wherein said network relaying ~~means~~ apparatus communicates by using a mobile IP.

8. (Currently Amended) A communication control method in a communications network system having plural network terminals and a network relaying ~~device~~ apparatus connected through a communication path, said network relaying ~~device~~ apparatus having a plurality of I/O ports connected with said network terminals and means for storing correspondence information relating to a connecting state of each of said network terminals, said correspondence information indicating correspondence between each of said I/O ports and a network address of each of said network terminals connected to said I/O ports, comprising the steps of:

registering user authentication information [[for]] with a correspondence to each network address of each of said network terminals;

receiving a packet ~~packets~~ transmitted by a first network terminal through one of said I/O ports;

if a source network address contained in said received packet does not correspond to said ~~receive~~ one of said I/O ports in the correspondence information stored in said means for storing the correspondence information ~~relating to a connecting state of said network terminal~~, updating a content of said means for storing ~~a connecting state of said network terminal~~ the correspondence information so that said source network address [[may]] corresponds to said ~~receive~~ one of said I/O ports;

determining a destination of said received packet based on the correspondence information ~~held in said means for storing the information relating to a connecting state of said network terminal~~ and transmitting said received packet to the determined destination; and

when ~~updating~~ the content of said means for storing the correspondence information ~~relating to a connecting state of said network terminal~~ is to be updated, requesting user authentication information for said first network terminal, for ~~doing~~ performing user authentication on a basis of the user authentication information registered for each network address if said source network address does not correspond to said receive I/O port stored in said means for storing the correspondence information ~~relating to a connecting state of~~

~~said network terminal~~, and changing the content of said means for storing the correspondence information ~~relating to a connecting state of said network terminal~~ and transmitting said received packet to the determined destination if the correct user authentication information is obtained.

9. (Currently Amended) A communication control method as claimed in claim 8, further comprising the steps of:

if the correct user authentication information cannot be obtained from said first network terminal, suppressing a change of the content of said means for storing the correspondence information ~~relating to a connecting state of said network terminal~~ and discarding said received packet.

10. (Currently Amended) A communication control method as claimed in claim 9, further comprising the step of:

if the correct user authentication information cannot be obtained from said first network terminal, suppressing the transfer of the ~~packets~~ packet at the I/O port having received said packet.

11. (Currently Amended) A communication control method as claimed in claim 8, further comprising the steps of:

registering said user authentication information and a contact mail address of the concerned user for each network address; and

if the correct user authentication information cannot be obtained from said first network terminal, transmitting to a contact mail address, registered [[in]] with a correspondence to said source network address, a message for indicating that a packet having incorrect user authentication information has been ~~transmitted~~ received.

12. (Currently Amended) A communication control method as claimed in claim 8, further comprising the steps of:

registering a contact mail address of an administrator of said network relaying ~~device~~ apparatus; and

if the correct user authentication information cannot be obtained from said first network terminal, transmitting to a contact mail address of the administrator of said network relaying apparatus a message [[for]] indicating that a packet having incorrect user authentication information ~~is transmitted~~ has been received.

13. (Original) A communication control method as claimed in claim 8, wherein said network address is an IP address.

14. (Original) A communication control method as claimed in claim 13, wherein said network relaying apparatus is a LAN switch including a virtual LAN.

15. (Original) A communication control method as claimed in claim 14, wherein if the correct user authentication information cannot be obtained from said first network terminal, a message [[for]] indicating ~~transmission~~ receipt of a packet having incorrect user authentication information is transmitted to all of the network terminals of the VLAN ~~whose address~~ having the network terminal that belongs to the source network address of said received packet.

16. (Currently Amended) A communication control method as claimed in claim 8, further comprising the steps of:

when determining a destination of said received packet, if the correspondence between the destination network address of said received packet and the I/O port needs the update of the content of said means for storing the correspondence

information relating to a connecting state of said network terminal, requesting user authentication information for the network terminal of said destination network address for the purpose of doing the user authentication on a basis of the user authentication information registered [[at]] for each network address, [[and]] updating the content of said means for storing the correspondence information, ~~relating to a connecting state of said network terminal~~ and transmitting said received packet if [[no]] correct user authentication information can be obtained.

17. (Currently Amended) A communication control method as claimed in claim 8, further comprising the step of:

requesting the user authentication information for each network address held in said means for storing the correspondence information ~~relating to a connecting state of said network terminal~~, for the purpose of periodically ~~doing~~ performing the user authentication on a basis of the user authentication information registered [[in]] for each network address.

18. (Currently Amended) A program for controlling communications in a communications network system having a

plurality of network terminals and a network relaying ~~device~~ apparatus through a communication path, said network relaying apparatus having a plurality of I/O ports connected with said network terminals and means for storing correspondence information relating to a connecting state of each of said network terminals, said correspondence information indicating correspondence between each of said I/O ports and a network address of each of said network terminals connected with said I/O ports, said relaying apparatus operating to receive packets transmitted by said network terminals through said I/O ports, if a source network address contained in said received packet does not correspond with said receive I/O port stored in said means for storing the information relating to a connecting state of said network terminal, update the content of said means for storing the information relating to a connecting state of said network terminal so as to make the correspondence correct, determine a destination of said received packet on a basis of the information stored in said means for storing the information relating to a connecting state of said network terminal, and transmit said received packet, said program containing a program code taking the steps of:

registering user authentication information at the network address of each of said network terminals; and

when updating a content of said means for storing the information relating to a connecting state of said network terminal, if said source network address does not correspond with said receive I/O port stored in said means for storing the information relating to a connecting state of said network terminal, requesting user authentication information for said first network terminal for doing user authentication on a basis of the user authentication information registered at said network address, and changing a content of said means for storing the information relating to a connecting state of said network terminal and transmitting said received packet if the correct user authentication information can be obtained.

19. (New) A network relaying apparatus, comprising:

a plurality of I/O ports adapted to be connected to respective network terminals having respective network addresses;

a relaying unit adapted to determine a destination of each packet received by the network relaying apparatus via any of said plurality of I/O ports;

a first storage adapted to store a host table;

an authenticating unit; and

a second storage adapted to store an authentication table;

wherein, upon receipt by said network relaying apparatus of a packet via one of said I/O ports, said relaying unit refers to the host table to determine, based on information in the host table, whether the packet should be relayed to the determined destination;

wherein, if said relaying unit determines that the packet should be relayed to the determined destination, then the relaying unit causes the packet to be relayed to the determined destination;

wherein, if the relaying unit determines that the packet should not be relayed to the determined destination, then the relaying unit sends an inquiry to the authenticating unit;

wherein, upon receipt of the inquiry from the relaying unit, said authenticating unit requests user authentication information to determine, based on information in the authentication table, whether the host table should be rewritten;

wherein, if the authenticating unit determines that the host table is to be rewritten, the authenticating unit notifies the relaying unit of a rewrite enable, responsive to

which the relaying unit causes the host table to be rewritten to include a correspondence between the I/O port that received the packet and the network address of the network terminal that sent the packet to the network relaying apparatus; and

wherein if the authenticating unit determines that the host table is not to be rewritten, the authenticating unit notifies the relaying unit of a rewrite inhibit.

20. (New) A network relaying apparatus, comprising:

a plurality of I/O ports adapted to be connected to respective network terminals:

a communication unit for transmitting and receiving packets through said I/O ports;

a relaying unit which determines a destination of each packet received via said plurality of I/O ports, for determining whether or not there is correspondence between one of said I/O ports which has received a packet and a source address contained in the received packet, and for requesting user authentication relating to the source address contained in the received packet if the source address contained in the received packet corresponds to another of said I/O ports different from said one of said I/O ports which has received the packet; and

an authenticating unit which authenticates a user on a basis of the source address, for receiving the request of user authentication from said relaying unit, and for providing notice of a rewrite enable of the correspondence between said one of said I/O ports which has received the packet and the source address contained in the received packet for said relaying unit if the user is authenticated to be correct.

21. (New) A network relaying apparatus as claimed in 20, wherein

if the user is not authenticated to be correct for the source address, said authenticating unit instructs said communication unit to discard the received packet including the source address.

22. (New) A network relaying apparatus, comprising:

a plurality of I/O ports adapted to be connected to respective network terminals;

a communication unit for transmitting and receiving packets through said I/O ports;

a relaying unit which determines a destination of each packet received via said plurality of I/O ports, for determining whether or not there is correspondence between one

of said I/O ports which has received a packet and a source address contained in the received packet, and for requesting user authentication relating to the source address contained in the received packet if there is no correspondence between the source address contained in the received packet and said one of said I/O ports which has received the packet; and

an authenticating unit which authenticates a user on a basis of the source address, for receiving the request of user authentication from said relaying unit, and for providing notice of a write enable of the correspondence between said one of said I/O ports which has received the packet and the source address contained in the received packet for said relaying unit if the user is authenticated to be correct.